STARM, I. Ye.

STARIK, I.YB., otvetstvennyy red.; SHCHERBAKOV, D.I., akademik, red.;
BARANOV, V.I., prof., red.; SHATSKIY, N.S., akademik, red.;
POLKANOV, A.A., akademik, red.; VINOGRADOV, A.P., akademik, red.;
AFANAS'YEV, G.D., red.; GERLING, E.K., prof., red.; PEKARSKAYA,
T.B., kand.geol.-min.nauk, red.; TUGARINOV, A.I., red.;
CHERDYNTSEV, V.V., red.; POLYAKOVA, T.V., tekhn.red.

[Proceedings of the fourth session of the Commission for the Determination of the Absolute Age of Geological Formations, May 12-14, 1956] Trudy chetvertoi sessii Komissii po opredeleniiu absoliutnogo vozrasta geologicheskikh formatsii; 12-14 maia 1955 g. Moskva, 1957. 297 p. (MIRA 11:1)

1. Akademiya nauk SSSR. Komissiya po opredeleniyu absolyutnogo vozrasta geologicheskikh formatsiy. 2. Chlen-korrespondent AN SSSR (for Starik, Afanas'yev).

(Geology, Stratigraphic)

STARIK, I. YE.

KHIOPIN, V.G.; VINOGRADOV, A.P., akademik, redaktor; GRINBERG, A.A., redaktor; GREBENSHCHIKOVA, V.I., kandidat khimicheskikh nauk, redaktor; KIOKMAN, V.R., kandidat khimicheskikh nauk, redaktor; NIKITIN, B.A., redaktor [deceased]; PASVIK, M.A., kandidat khimicheskikh nauk, redaktor, [deceased]; RATNER, A.P., doktor khimicheskikh nauk, redaktor [deceased]; STARIK, I.Ye., redaktor; BROYTMAN, Ya.A., redaktor izdatel stva; PEVZNER, R.S., tekhnicheskiy redaktor

[Collected works] Izbrannye trudy. Moskva, Izd-vo Akad. nauk SSSR. Vol.2. [Works on inorganic and analytic chemistry and on geochemistry] Trudy po neorganicheskoi i analiticheskoy khimii i po geokhimii. 1957. 306 p. (MIRA 10:8)

1. Chlen-korrespondent Akademii nauk SSSR (for Grinberg, Starik, Mikitin)
(Chemistry, Analytic) (Chemistry, Inorganic) (Geochemistry)

STANIN, I. YE.

KHLOPIN, V.G.; NIKITIN, B.A. [deceased] otvetstvennyy redaktor; RATNER,

A.P. [deceased] doktor khimicheskikh nauk, otvetstvennyy redaktor;

VINOGRADOV, A.P., akademik, redaktor; GRINBERG, A.A., redaktor;

GHEBENSHCHIKOVA, V.I., kandidat khimicheskikh nauk, redaktor;

KLORMAN, V.R., kandidat khimicheskikh nauk, redaktor;

PASVIK,

M.A. [deceased] kandidat khimicheskikh nauk, redaktor;

RIK, I.Ve. redaktor; BROYTMAN, Ya.A., redaktor izdatel stva;

PEVZNNI, R.S., tekhnicheskiy redaktor

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akad. nauk SSSR. Vol. 1 [Works in the field of radiochemistry] Trudy v oblasti radiokhimii. 1957. 370 p. (MIRA 10:4)

1. Chlen-korrespondent Akademii nauk SSSR (for Mikitin, Grinberg, Starik (Radiochemistry)

"Emanation as a Criterion of the Solid State"(theses)

STARIK

agthor: [⊕] ⁴ Zolotov, Yu. A. 89-4-5-23/26

TITLE:

Conference on the Use of Radioactive Isotopes in Analytic Chemistry (Soveshchaniye po primeneniyu radioaktivnykh izotopov

v analiticheskov khimii)

PERIODICAL: Atommaya Energiya, 1958, Vol 4, Nr 5, pp 49-495 (USSR)

ABSTRACT:

In Moscow on December 2-4, 1957, a meeting on the use of radioactive isotopes in analytic chemistry was called by the Department of Chemistry of the Academy of Sciences (USSR) and the Committee on Analytic Chemistry of the Institute of Geochemistry and Analytic Chemistry imeni V. I. Vernadskiy. The meeting was attended by 450 members of various scientific research institutes, institutions of higher learning, and industrial enterprises, including 30 scientists from England, Bulgaria, the Chinese People's Republic, Poland, Rumania, Czechoslovakia, and the United States. The purpose of the meeting was to consider the work of the Soviet Union in 1) the use of radioactive isotopes for the development of new methods of analysis based on radioactivity, 2) developing the theoretical bases of analytic chemistry, 3) improving and testing the methods of separating and differentiating chemical elements, and 4) determining those physico-chemical values which have analytical

Card 1/5

89-4-5-23/26

Conference on the Use (Cont.)

significance. The 50 reports presented at this meeting will be published in a collection under the title "The Application of Radioactive Isotopes in Analytic Chemistry" (Primeneniye radioaktivnykh izotopov v analiticheskoy khimii). Following are the general areas of consideration and summaries of the reports given at the meeting:

I. Methods of analysis based on radioactivity:

I. Ye. Zimakov and G. S. Rozhavskiy (Gintsvetmet [State Institute of Nonferrous Metals]) - a new variant of the method for determining minute quantities in mixtures, called the method of "multi-radioactive dilution", which eliminates measurement of the specific activity of preparations - thereby simplifying analysis. I. P. Alimarin and G. H. Bilimovich (GECKhI [Geochemical Institute of the Academy of Sciences (USSR)] - a method for separating tantalum from titanium, zirconium, and niobium; and identifying tantalum by isotopic dilution. The precipation of tantalum was induced by a new organic reagent, [ammonium benzeneselenate] (benzolseleninovokisliy ammoniy). Radiometric titration (two reports; author not given) - a new method of volumetric analysis in which the point of equivalence is determined by measuring the activity of the solution. K. B. Yatsimirskiy and Ye. N. Roslyakova

Card 2/5

Conference on the Use (Cont.)

83-4-5-23-/26

(Ivanovo Institute of Chemical Technology) - the use of solutions of complex compounds (luteo salts) of Co^{OO} for identifying large anions (phosphates, molybdites, and sulfates) by the radiometric titration method. I. M. Korenman and F. R. Sheyanova (Gor'kiy State University) - the possibility of using non-isotopic indicators in radiometric titration and other areas of analytic chemistry. A. I. Kulak (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev) - the determination of micro-admixtures (10⁻⁵ to 10⁻⁶ %) of cobalt, copper, tellurium, arsenic, and antimony in ferrous exides. A. A. Zhukhovitskiy and others (USSR) - development of a new rapid method of analysis based on the reflection (backward scattering) of beta-rays (β-rays).

V. B. Gaydadymov (GECKhI) and L. I. Il'ina (Moscow Electric Light Factory) - determination of the properties of binary tantalum-niobium alloys by the β-ray-reflection method.

II. Methods of identifying and separating elements: M. M. Senyavin (GECKhI) - chromatographic analysis using radioactive isotopes; for example, research on separating infinitely small quantities of substances, quantitative analysis by isotopic dilution, etc.

E. I. Il'yenko, B. P. Nikol'skiy and A. M. Trofimov (RIAM [Radium Institute of the Academy of Sciences (USSR)]) - the results of research on the adsorption of mercury in ion exchange resins.

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89-4-5-23/26

Conference on the Use (Cont.)

L. V. Borisova (GECKhI) - data on the distribution of rhenium and molybdenum between [anionite] EIE-10 and solutions of hydrochloric acid. A. K. Lavrukhina, K. Yun-Pin and V. Knoblokh (GEOKhI) - a new complexlyforming substance [trioxyglutaric acid] (tricksiglutarovaya kislota), which is no less effective for identifying purposes than lactic acid used at present. V. I. Kuznetsov and T. G. Akinova (GECKhI) - separating of uranium from sea-water by the co-precipitation of [thiocyanate] (roderidnyy) complexes of uranyl with the sedimentation of a large organic cation of hodanide - methyl violet. Some reports were related to the question of co-precipitation in inorganic collectors: [Tu. V. Morachevskiy and A. I. Novikov (Leningrad State University) - "Coprecipitation of several elements of low concentration with metal hydroxides". I. Ye. Starik, F.Ye.Starik, and A. N. Apollonova (RIAN) - "Carbonate method of separating microquantities of uranium from weighable smounts of iron*. A. K. Lavrukhina (GEOKhI) - examination of peculiarities in the behaviour of insignificant concentrations of radioactive isotopes in solutions, and experimental difficulties caused by the loss of elements adsorbed in filters and glass; the formation of radio-colloids, etc. V. P. Shredov and L. M. Ivanova. (RIAH) - methods of separating the isotopes No., Agil, Cdll and Balto from camplex mixtures.

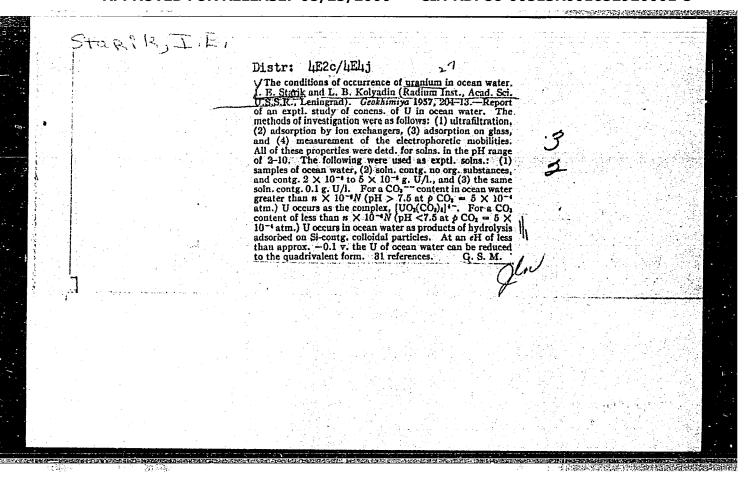
Card 4/5

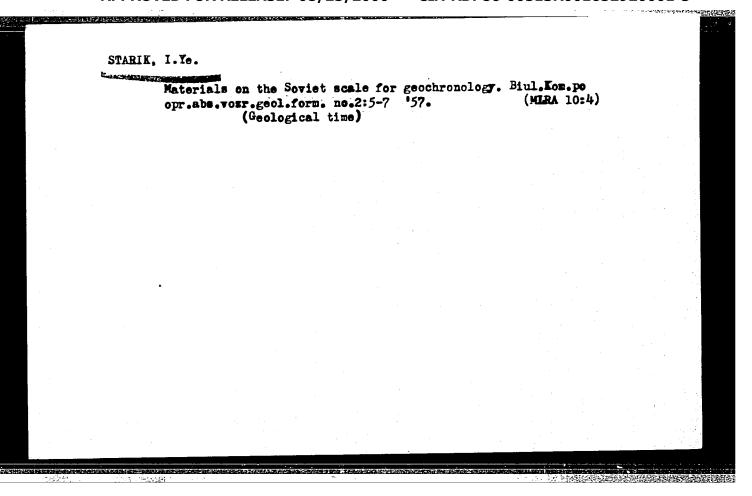
89-4-5-23/26

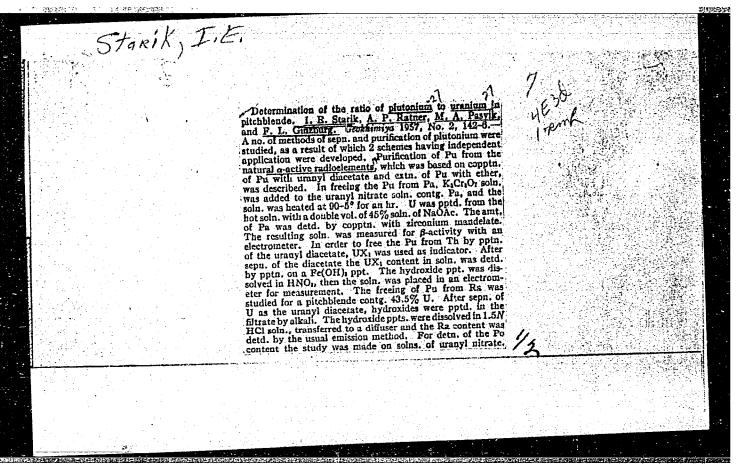
III. Some general problems of analytical chemistry: N. I. Izmaylov and V. S. Chernyy (Khar'kov State University) - research on the influence of the nature of solvents on the solubility of silver chlorides and cesium. The authors related the degree of solubility to the dielectric constant of the solvent. D. M. Ziv and I. A. Efros (RIAN) - a method for determining solubility by the "ultra-micro" method. N. P. Komer (Khar'kov State University) - (in connection with the above method), reported on the use of radiochemical measurements in combination with a determination of the molar coefficient of absorption for the study of complex ions in two-phase systems. I. M. Kol'tgof (Minnesota State University, USA) - new data characterizing the aging and development of crystalline sediments with the aid of radioactive isotopes. A. K. Lavrukhina and S. S. Rodin (GEOKhI) the results of several experiments with the behaviour of element 87 (France) by co-precipitation with various carriers, extraction by solvents, etc. I. M. Irving (Oxford University, England) - study of the analytical properties of indium with the aid of radioactive isotopes. A. A. Grizik and N. I. Marunina (Giredmet [State Rere Metals Scientific Research Institute]) - the use of radioactive isotopes for control of production. for example, production of rare-earth metals.

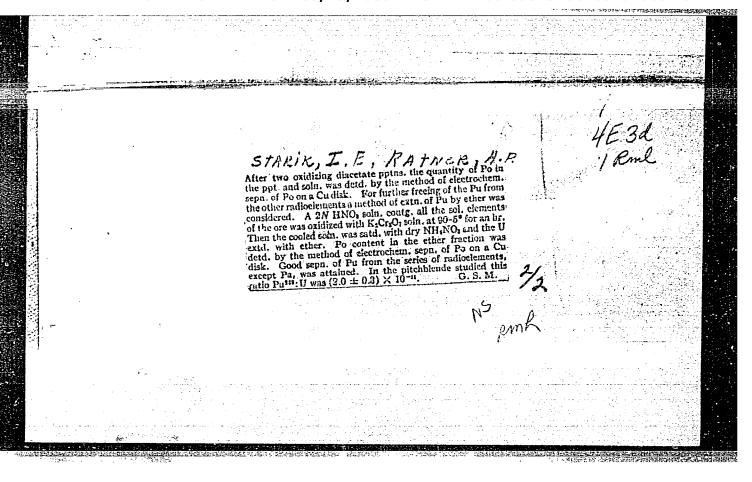
Card 5/5

1. Conferences—Radioactive Isotopes—Moscow 2. Isotopes (Radioactive) — Applications









CIA-RDP86-00513R001652920001-5 "APPROVED FOR RELEASE: 08/25/2000

AUTHORS:

Starik, I E. and Kositsin, A.V.

583

TITLE:

The State of Small Quantities of Radio-Elements in Solutions. I. State of 3- and 4-valent Ruthenium in Hydrochloric Acid Solutions. (Sostoyanie Malykh Kolichestv Radioelementov v Rastvorakh. I. Sostoyanie 3- i 4-valentnovo ruteniya v solyanokislykh

rastvorakh).

PERIODICAL:

"Zhurnal Neorganicheskoy Khimii" (Journal of Inorganic Chemistry, Vol.11, No.2, pp.444-451. (U.S.S.R.),1457

ABSTRACT:

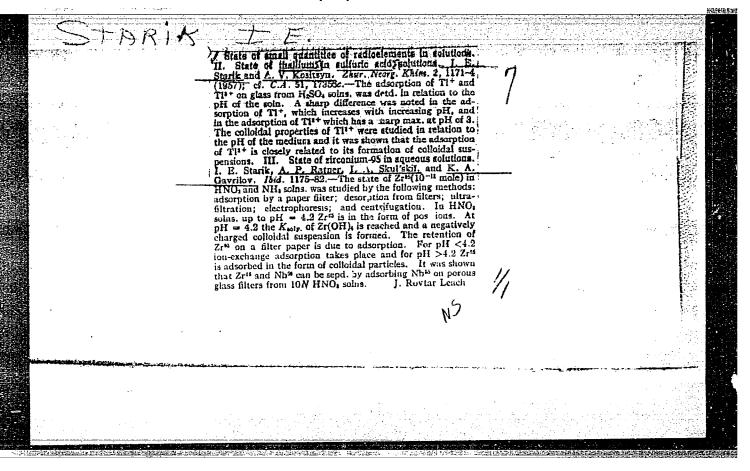
A characteristic feature of radio-elements is their ability to become adsorbed on precipitates and colloidal impurities present in solutions as well as on the walls of chemical apparatus. Thus adsorption effects are of great importance in determining the behaviour of small quantities of radio-elements and provide information on the state of these elements in solution. The radioactive isotopes of ruthenium are one of the main splinter elements and in the present investigation parallel studies were made of the adsorption of ruthenium on glass and of its state in hydrochloric acid solutions.

The adsorption on glass of 3- and 4- valent ruthenium in relation to the pH was studied for hydrochloric-acid solutions with ruthenium concentrations of 10-4 to 10-7mol. Ultra-filtration was used to determine the range of existence in these solutions

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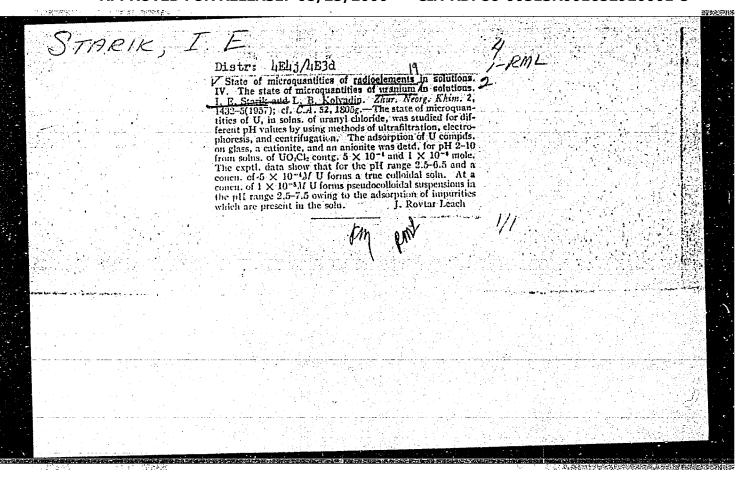
APPROVED FOR RELEASE: 08/25/2000



STARIK, I.Vo... RATNER, A.P. [deceased], Madd SKIY, I.A.; GAVRILOV, K.A.

Conditions of microcuantities of radicelements in solutions. Part 3:
Condition of 2r⁶⁵ in aqueous solutions. Zhur. neorg. khim. 2 no.5:
1175-1182 My '57.

(Zirconium-Alrotopes) (Water)



STARIK, I.Ye.; KOLYADIN, L.D.

Conditions for the presence of uranium in ocean water [with summary in English]. Geokhimiia no.3:204-213 '57. (MIRA 10:7)

1. Radiyevyy institut AN SSSR, Leningrad. (Uranium) (Sea water)

STARIK, I.Ye, STARIK-SMAGINA, A.S.

Polarographic determination of uranium, Trudy Radiev. inst. AF
SSSR 5 no.2:105-116 '57. (MIRA 10:8)

(Uranium) (Polarography)

STARIK, I.Ye.; STARIK, F.Ye.

Chromatographic analysis of small quantities of lead. Trudy Radiev.

(MIRA 10:8)

inst. AN SSSR 5 no.2:129-133 '57.

(Lead)

(Ghromatographic analysis)

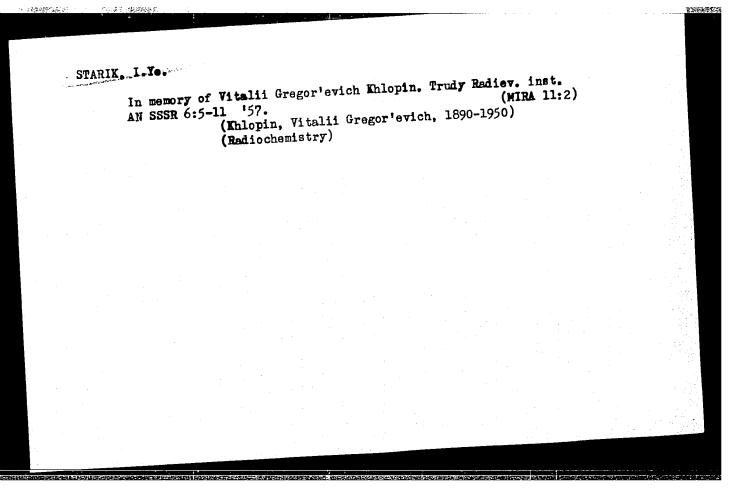
STARIK, I.ve.; MELIKOVA, O.S.

Branating properties of minerals. Trudy Radiev. inst. AF 355R

Staring properties of minerals. Trudy Radiev. inst. AF 355R

(NIRA 10:8)

(Radioactivity) (Minerals)



STARIK, I.Ye.; POLEVAYA, N.I.

Leaching out ThX and RdTh from minerals. Trudy Radiev. inst. AN

(MIRA 11:2)

SSSR 6:104-118 '57.

(Thorium compounds) (Leaching)

STARIK L. L. L. L. SOBOTOVICH, E.V.; LOVTSYUS, G.P.; AVDZEYKO, G.V.;

LOVTSYUS, A.V.

Mode of lead occurrence in natural formations [with summary in English]. Geokhimia no.7:584-591 '57.

1.Radiyevyy institut AN SSSR, Leningrad.

(Lead)

Starik, I.Ye. and Sobotovich, E.V.

11-9-8/14

AUTHOR:

TITLE:

Lead in Natural Formations and Its Isotopic Composition (Svinets v prirodnykh obrazovaniyakh i yego izotopnyy sostav)

PERIODICAL:

Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1957,

9, p 81-85 (USSR)

ABSTRACT:

Lead in natural formations can occur in various forms. stability of lead forms with respect to different temperatures and media is determined by their physico-chemical and mineralogical properties. In order to learn the possibility of fractionation of lead isotopes the authors carried out experiments with pitchblende from Ioachimsthal, Caledonian granite and a most ancient granite from Northern Karelia. The results of these experiments were the following:

1. During the sublimation of lead from the pitchblende in a hydrogen flow, the fractionation of different lead forms takes place, which leads to the change of isotopic composition of leads precipitated at different temperatures.

2. The shift of isotopic composition with temperature increase is directed toward the relative increase of the

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content of radiogenic lead. 3. The investigation of other samples containing lead has

Lead in Natural Formations and Its Isotopic Composition

11-9-8/14

shown a difference in behavior of different leads.

4. The method of lead sublimation from minerals and rocks may prove to be a valuable method for investigating the forms of lead occurrence in them and estimation of their age. The article contains 1 figure, 3 tables and 2 non-Slavic

references.

ASSOCIATION:

Radium Institute imeni "V.G. Khlopin" (Radiyevyy institut imeni

V.G. Khlopina) Leningrad

SUBMITTED:

28 December 1956

AVAILABLE:

Library of Congress

Card 2/2

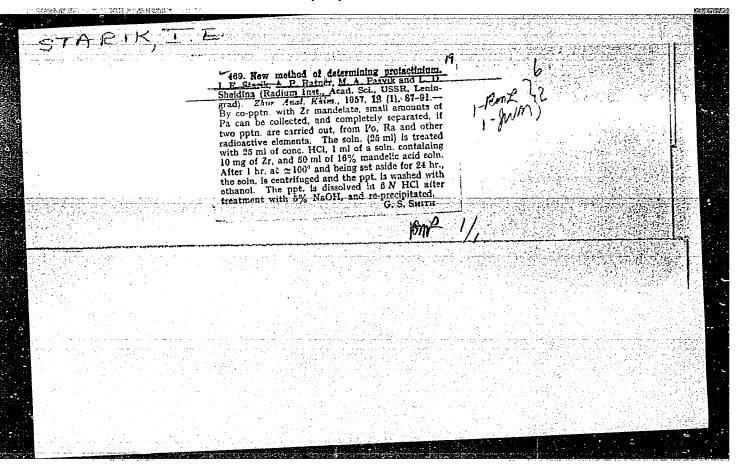
STARIK, I.Ye.; MELIKOVA, O.S.

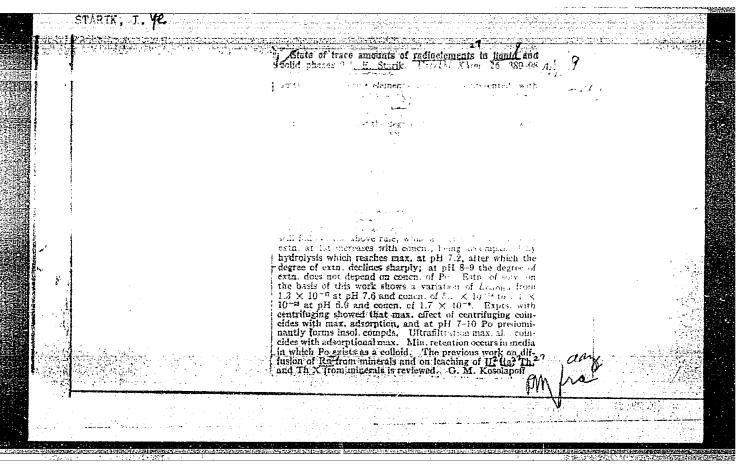
Raission potentiality as a criterion of solid state (theses).

(MIRA 11:3)

Probl. kin. i knt. 9:314 '57.

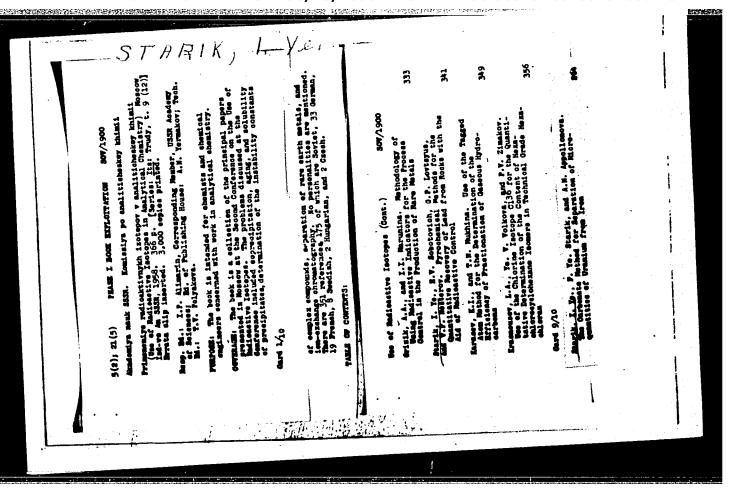
(Radioactive substances) (Solids)





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PAUSE I BOCK ELFORTETICS SOUPLING SALMITS BORN EMPLOYEE TO REFLORITETION WARRANTH ABOUNDER STANCY, TO, 15 (RESCRIPTION) ROSCON, 1555 TOP, ETTERS SLEED IN COLUMN 1555	21. T.A. Mosenber, Academated Depart 7 cm. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	This Bills, and old, discussing the state of the control of the co	Algebrary, E.F. Physical Properties of Stean Mistories and the Assertical Particular Properties of Stean Mistories are appreciation in the Light of Myodieses on the Origin of Mascrites artin, L.A. Opaque Missories in Stone Mascrites Totin, L.A. Opaque Missories in Stone Mascrites of the Myodieses Mascrite Stone Mascrites from a contraction of the Circumstances During the Philips Marchine Stone Mascrites Stone Mascrites Stone Mascrites and the Laboratory Sciences. Laboratories Stone Mascrites Stone Creates on the Jahah of Sciences. Mascrites Mascrites Missories of the Enight of Limary Creates Experiment Rypodieses of the Origin of Limary Creates Scritte, I.T. The Popularisation of Mascrites (Abridged Report) Scritte, I.T. The Mascrites Mascrites Mascrites (Abridged Report) Starit, I.T. The Mascrites Missories and Its Inocopic Composition	RALL CONTROL OF STAND OF Minerals in Meteorites by the Method of Rocks, M.A. The Stand of Minerals in Meteorites Torobymer, 0.0, , and 0. Emmedorit. Monyolism Meteorites Torobymer, 0.0, , males of a Stand of a Solida Observe is the Unwine Same, Man Do. 1974. Daner, M. H. Bolides is the Urals planning Academy of Sciences. Samer, M. (Corresponding Member of the Sulgarian Academy of Sciences. Rev Center for the Stand of Meteorites is Bulgaria.

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STARIK, I.Ye., otv. red.; SHCHERBAKOV, D.I., akad., red.; VINOGRADOV, akad., red.; SHATSKIY, N.S., akad., red.; POLKANOV, A.A., akad., red.; AFANAS'YEV, G.D., red.; BARANOV, V.I., prof., red.; PEKARSKAYA, T.B., kand. geol.-miner. nauk, red.; IVANOV, B.V., red. izd-va,; RYLINA, Yu.V., tekhn. red.

[Proceedings of the fifth session of the Commission to Determine the Absolute Age of Geological Formations] Komissia po opredeleniu absolutnogo vozrasta geologicheskikh formatsii. Trudy piatoi sessii...; 19-23 maia 1956 g. Moskva, 1958. 367 p. (MIRA 11:11)

1. Akademiya nauk SSSR. Komissiya po opredeleniyu absolyutnogo vozrasta geologicheskikh formatsii. 2. Chlen-korrespondent AN SSSR(for Starik, Afanas'yev).

(Geological ::)

STARIK, I. Ye. (Radium Inst im V. G. Khlopin AS USSR)

"Adsorption Phenomena and Their Role in Radiochemical Investigations"

Isotopes and Radiation in Chemistry, Collection of papers of 2nd All-Union Sci. Tech. Conf. on Use of Radioactive and Stable Isotopes and Radiation in National Economy and Science, Moscow, Izd-vo AN SSSR, 1958, 380pp.

This volume published the reports of the Chemistry Section of the 2nd AU Sci Tech Conf on Use of Radioactive and Stable Isotopes and Radiation in Science and the National Economy, sponsored by Acad Sci USSR and Main Admin for Utilization of Atomic Energy under Council of Ministers USSR Moscov 4-12 Apr 1957.

STARIK, I. YE.

Starik, I. Ye., Butomo, S. B., Drozhzhin, V. M., Protopopov, Kh. V. - The Chemical Processing of Samples at the Radiocarbonic Dating by the Scintillation Method.

The Sixth Session of the Committee for Determining the Absolute Age of Geologic Formations at the Department of Geologic-Geographical Sciences (OGGN) of the USSR Academy of Sciences at Sverdlovsk in May 1957

les. Ah Hauk books, Ser. Geol., No. 1, 1980, p. 115-117 author Pekarskaya, T. B.

CIA-RDP86-00513R001652920001-5" APPROVED FOR RELEASE: 08/25/2000

STARIK, I. YE.,

Starik, I. Ye., E. V. Solotovich, G. V. Avzdeyko, G. I. Lovtsyus, A. V. Lovtsyus - The Method of Locating Lead in Radioactive Minerals.

The Sixth Session of the Committee for Determining the Absolute Age of Geologic Formations at the Department of Geologic-Geographical Sciences (CGCN) of the USSR Academy of Sciences at Sverdlovsk in May 1957

Izv. Ak Nauk SSSR, Ser. Geol., No. 1, 1958, p. 115-117 author Pekarskaya, T. B.

Starik, I. Ye., Protopopov, Kh. V. - The Use of the Scintillation Method for STARIK, I. YE. the Determination of Age According to Radiocarbon Contents.

The Sixth Session of the Committee for Determining the Absolute Age of Geologic Formations at the Department of Geologic-Geographical Sciences (OGGN) of the USSR Academy of Sciences at Sverdlovsk in May 1957

Izw. Ak Nauk SSSR, Ser. Geol., No. 1, 1958, p. 115-117 author Pekarskaya, T. B.

CIA-RDP86-00513R001652920001-5" APPROVED FOR RELEASE: 08/25/2000

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652920001-5 是一个人,并且不是他们的人们的人们的人们的人们的人,但是这种是是这种的人的人,也是这种的人,但是是是我们的人们的人们的人们的人们的人们的人们的人们的人们的人们的

Starik, I. Ye., F. Ye. Starik, A. N. Yelizarova - Comparative Leaching Out of Several Isotopes.

The Sixth Session of the Committee for Determining the Absolute Age of Geologic Formations at the Department of Geologic-Geographical Sciences (OGGN) of the USSR Academy of Sciences at Sverdlovsk in May 1957

Izv. At Nauk SSSR, Ser. Geol., No. 1, 1958, p. 115-117 author Pekarskaya, T. B.

CIA-RDP86-00513R001652920001-5" APPROVED FOR RELEASE: 08/25/2000

STARIK, I. YE.,

Starik, I. Ye., E. V. Sobotovich, G. V. Avzdeyko, G. I. Lovts; us, A. V. Lovtsyus--Sublimation as a Method for Determining Isotope Contents of Lead.

The Sixth Session of the Committee for Determining the Absolute Age of Geologic Formations at the Department of Geologic-Geographical Sciences (CGGN) of the USSR Academy of Sciences at Sverdlovsk in May 1957

Izv. Ak. Nauk SSSR, Ser. Geol., So. 1, 1958, p. 115-117 author Pekarskaya, T. B.

CIA-RDP86-00513R001652920001-5" APPROVED FOR RELEASE: 08/25/2000

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652920001-5 I Ye. STARIK, 7-1-1/12 Starik, I. Ye., Kuznetsov, Yu. V., Grashchenko, S. M., Frenklikh, M. S. AUTHORS: On the Ionium Method of Determining the Age of Marine (K voprosu ob ioniyevom metode opredeleniya vozrasta morskikh TITLE: osadkov) Geokhimiya, 1958, Mr 1, pp. 3-13 (USSR). PERIODICAL: First the authors report on the research results which have hitherto been obtained in this field. Then they describe their own research methods and the process of analysis. Seven cores ABSTRACT: from the marine bottom of the Indian and Pacific Ocean were investigated. The content of Mn, Fe, CaO, Ra, Jo, Th and U, and its alteration with increasing depth were represented graphically. For most of the cores the obtained values for Ra, Th, Jo and U are given another time in tables. According to the distribution of the elements it can be distinguished between: 1) Nearshore sediments (cores 2 and 3). The distribution of ionium and radium is difficult to be explained, they are not in the card 1/3

7-1-1/12

On the Ionium Method of Determining the Age of Marine Sediments.

radioactive equilibrium. This is due to external influences. 2) Sediments if average kind (core 1). The distribution of the two elements remains unclear, there is, however, already

3) Deep sea sediments (cores 4, 5, and 7). The radium concentration is reduced with increasing depth; several maxima and minima are explained by the changing conditions during sedimen= tation. Zhe vertical distribution of ionium corresponds completely

to that of radium.

A migration of radium in sediments does not take place. The sedi= Hence it can furthermore be concluded: mentation velocity in the marine regions of cores 4 and 5 changed only to a little extent with the time. In all cores investigated the concentration of uranium and thorium remains constant along the core. In a series of cores there was an obvious connection between the distribution of radium and ionium on the one hand and calcium

There are 8 figures, 5 tables, and 13 references, 3 of which are Slavic.

Card 2/3

On the Ionium Method of Determining the Age of Marine Sediments 7-1-1/12

ASSOCIATION: Radium Institute imeni V. G. Khlopin, AN USSR, Leningrad

(Radiyevyy institut im. V. G. Khlopina AN SSSR, Leningrad).

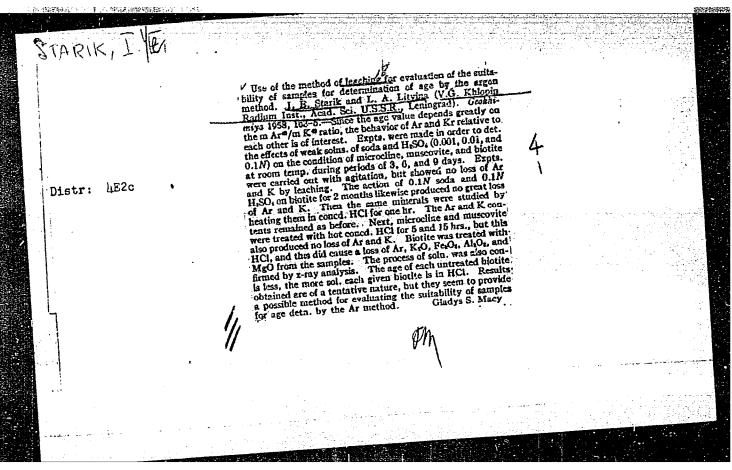
July 22, 1957. SUBMITTED:

Library of Congress. AVAILABLE:

1. Sedimentation analysis 2. Ionium-Application

Card 3/3

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652920001-5"



STARIK, I. Ye.

"Method of the perfect separation of micro quantities of uranium from weighable quantities of iron by means of the isotope U233."

report presented at The Use of Radioactive Isotopes in Analytical Chemistry, Conference in Moscow, 2-4 Dec 1957

Vestnik &k Nauk SSSR, 1958, No. 2. (author Rodin, S. S.)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652920001-5"

Starik, I. Ye., Rozovskaya, N. G.,

62-2-28/28

AUTHORS:

· · TITLE:

Letter to the Editor (Pis'ma redaktoru)

PERIODICAL:

Izvestiya AN SSSR Otdeleniye Khimicheskikh Nauk, 1958, Nr 2,

pp. 252-252 (USSE)

ABSTRACT:

The sorption of tellurium with glass in an alkaline medium was examined with the purpose of investigating the nature of the microquantities of radioelements in solvents. On that occasion the radioactive isotope Te127 was used (half-life 115 days), due to internal conversion it was later converted to its isomer with a half-life of 9,3 hours. Both isomers are in a radioactive equilibrium, therefore their lives are characterized by the half-life of the parent-substance. It was further found that the decrease in the activity of the separation of tellurium taking place on tellurium proceeds much faster than the decrease in this activity in the solvent. Moreover measurements . of the activity were made at certain intervals of time. From the obtained results may be seen that under the given conditions a selection sorption with a half-life of 9,3 hours takes place. The data given in this letter speak in favor of the me-

Card 1/2

62-2-28/28

Letter to the Editor

thod with glass as the most reliable one. It permits the characterization of the state of radioelements in the solvent.

ASSOCIATION:

Institute for Radium Research imeni V.G. Khlopin (Radiyevyy

institut im. V.G. Khlopina)

SUBMITTED:

January 10, 1958

AVAILABLE:

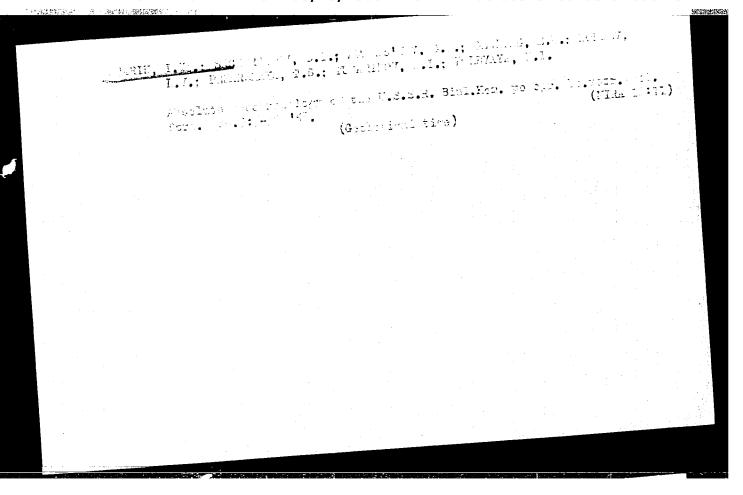
Library of Congress

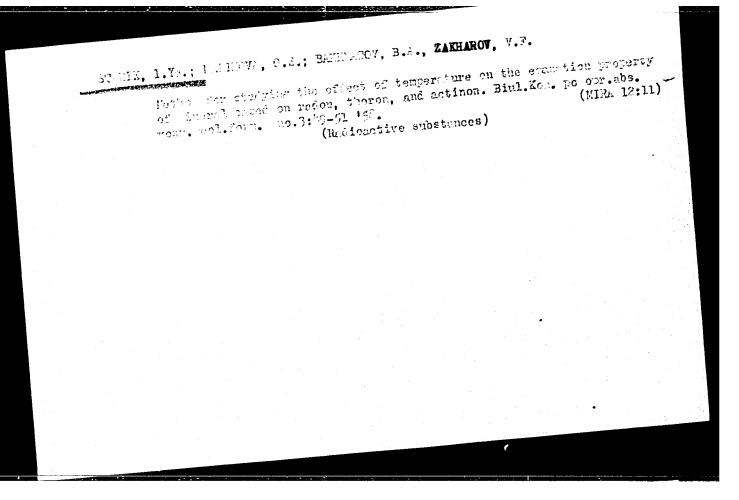
1. Tellurium & glass-Sorption 2. Tellurium 127 isotopes

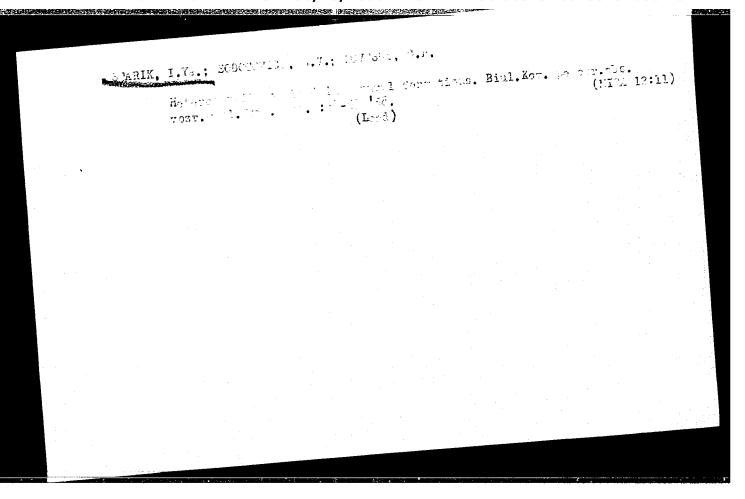
(Radioactive)-Applications

USCOMM-DC-54733

Card 2/2







STARIK, I.Ye.; STARIK, F.Ye.; YELIZ MCVA, A.M.; FARMAYAY, Yo.P.

Lenchton Ack from minerals. Birl. Kom. po opr. abs. vour. gool. form.
(MINA 12:11)

to.3:60-61 '50.
(Locching)

(Radium-Isotopes)

78-1-1/43

STARIK, I.Ya.

AUTHOR:

Starik, I. Ye., Corresponding Member of the AN USSR; President of the Organization Committee of the First All-Union Congress of Radiochemistry.

TITLE:

Preface to the Published Material of the First All-Union Congress of Radiochemistry (Predisloviye k publikuyemym materialam pervogo vsesoyuze nogo soveshchaniya po radiokhimii).

PERIODICAL:

Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr l, pp. 3 - 5 (USSR).

ABSTRACT:

The Allunion Congress of Radiochemistry which took place in Leningrad on March 5, 1957, was, properly speaking, not the first, but the second cons gress, since already in 1932, a conference on radiochemistry was held in Leningrad, organized by the 1st Radio-Institute. The subjects of this congress agreed essentially with the topics of the congress in 1957. (The re-

A great number of participants attended this congress (more than 600 per sons). More than 50 reports and communications were attended to in 7 mees tings. The following basic problems of theoretical radiochemistry were

1 - The forms of occurrence of small quantities of radioactive substances dealt with: in solutions and solids.

card 1/4

78-1-1/43

Preface to the Published Material of the First All-Union Congress of Radiochemistry.

The congress made the following proposals for the further successful

- 1 To request the division of chemical sciences of the AN USSR to establish a special laboratory for the synthesis of organic solvents and complex-formers for extraction and chromatography at one of the
- 2 For safeguarding the further extension of the works in the field of chromatography, the commission of chromatography of the division of chemical sciences of the AN USSR should be requested to take measus res to increase the selection of ion exchange resins and to guarans tee the availability of automatic first-class laboratory-outfits.
- 3 To extend the study of methods for separating radioisotopes without carrier, also by using organic compounds. To request the division of chemical sciences of the AN USSR and other organizations to take measures for the supply of pure radiochemical preparations.
- 4 To request the Ministry for Higher Education USSR to introduce lectures on radiochemistry as required subject at chemical Universities.
- 5 In view of the increasing quantity of works on radiochemistry the Presidential Committee AN USSR should be requested to publish a new periodical in 1958, viz. the "Radiokhimiya".

card 3/4

. STARIK, I. K

78-1-2/43

AUTHOR:

TITLE:

The State of Micro-Quantities of Radioactive Elements in Both Liquid Starik, I. Ye. and Solid Phase (Sostoyaniye mikrokolichestv radioelementov v zhidkoy

PERIODICAL:

Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr l, pp. 6 - 15 (USSR). i tverdoy fazakh).

ABSTRACT:

In the major part of the report the author investigates whether microquantities of radio-elements are present in solutions, colloid or as ions. First the experimental difficulties are discussed, and the results of other investigators, above all those of Schweitzer, (reference k) are

The author divides the methods of investigation into two groups, first those which prove colloids and pseudo-colloids, i. e. adsorption on contaminations, especially SiO₂, like dialysis, ultrafiltration, ultramicros

scopy, velocity of diffusion, centrifuging, secondly the adsorption and

desorption with various ph values and electrochemical methods. The author's investigations comprise! Adsorption of Po on glass in dependence on the pH-value, desorption of Po from quartz glass and pyrex-glass L-36 by H₂O, O, lin HNO₃, O, lin NaOH.

card 1/3

The State of Micro-Quantities of Radioactive Elements in Both Liquid and Solid Phase.

- 1) A minimum of colloid properties corresponds to a maximum of adsorp-2) A myximum of colloid properties and adsorption coincide (Ru, Tl^{III}, tion and viceverse (Pb, Bi); a real colloid is present.
- 3) The maximum of colloid properties begins with very low ph-values where no adsorption on glass or paper takes place yet (Zr, U); s
- 4) The adsorption of the radioelement increases with increasing pH

without maximum (Tla, Ra)) no colloid-phase is present. Ion exchangers cannot be used as means of adsorption with investigations

The separation of Po on copper within the range of concentration lo because of the more complicated conditions. lo-3 g atom/l pH l-13 was electrochemically investigated. The solubility of Po (OH) with pH 7 amounts approximately to 9.10 10 g atom/L. Data on the solubility of Po, Ru, Tl, Zr, Pm, La hydroxides are compared with da

The radiographical method (action of the solution on a photographic emula sion protected against chemical attack proved to be untit.

Concluding the author discusses very briefly the behavior of radioeles ments in the crystal lattice.

Card 2/3

STARIK, I. Ye.

AUTHORS:

Starik. I. Ye., Starik. F. Ye., Apollonova, A. N.

78-1-23/43

TITLE:

Adsorption of Micro Quantities of Uranium by Ferric Hydroxide and Desorp tion by Means of the Carbonate-Method. (Adsorbtsiya mikrokolichestv urana gidrookis'yu zheleza i desorbtsiya yego karbonatnym metodom).

PERIODICAL:

Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 1, pp. 121-128 (USSR).

ABSTRACT:

The adsorption of uranium on iron is important for analytical chemistry, since iron is often used as a carrier substance. The authors used U in

First the adsorption on ferric hydroxide with increasing pH is investigated. Carbonate-free ammonia serves here as basis. The maximum in the curve between pH 5 and pH 8 is explained by the fact that the hydroxide colloids are charged with the same signs outside of this range. This was electrophoretically proved. In carbonate solution the curve shows first a similar course which, however, declines steeply after pH 5,3, since uranium dissolution on the course which, however, declines steeply after pH 5,3, since uranium dissolution on the course which is a since uranium dissolution on the course which is a since uranium dissolution on the course which is a since uranium dissolution on the course which is a since uranium dissolution on the course which is a since uranium dissolution on the course which is a since uranium dissolution on the course which is a since uranium dissolution on the course which is a since uranium dissolution on the course which is a since uranium dissolution on the course which is a since uranium dissolution of the course which is a since uranium diss ves as complex carbonate and iron precipitates completely. The precipitates tion in ammoniacal medium was investigated with various quantities of uranium and iron with respect to its completeness. The precipitations and their results are summarized in a table.

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Adsorption of Micro Quantities of Uranium by Ferric Hydroxide

Adsorption of Micro Quantities of Uranium by Hethod. and Desorption by Means of the Carbonate Method.

Prior to their dealing with desorption, the authors investigate the influence of the alkali carbonates, especially of the ammonium carbonate, on the precipitation of the iron. Further the desorption of uranium is investigated, quantities of lo-5 g are quantitatively desorbed, with quantities of lo-5 g are quantitatively desorbed, investigated, quantities of 10 g are quantities of so occur. This is attribuentities of lo 6 to 10 g, however, losses up to 35% occur. This is attribuentities of lo 6 to 10 g, however, losses up to 35% occur. ted to the penetration of uranium into glass or platinum with the evapor ration of the acid solution, as is proved. These losses can be avoided by

1) The coprecipitation of micro quantities of uranium with ferric hydroadding metatitanic acid.

2) The capability of adsorption depends on the pH of the solution in

3) Micro quantities of uranium precipitate with metatitanic acid under

4) The conditions of desorption of micro quantities of uranium (lo-5g lo 8g) from ferric-hydroxide-colloid (U:Fe = 1:105) were determined

5) The conditions of complete separation of micro quantities of uranium (lo 5 = lo 8 g) from solutions by means of adsorption with ferric hydros xide were determined.

78_1_23/43 Adsorption of Micro Quantities of Uranium by Ferric Hydroxide and Desorption by Means of the Carbonate-Methods. There are 5 figures, 8 tables, and 24 references, 13 of which are Slavic.

June 18, 1957 ·: SUBMITTED:

Library of Congress. AVAILABLE:

card 3/3

CIA-RDP86-00513R001652920001-5" APPROVED FOR RELEASE: 08/25/2000

The State of Micro Quantities of Promethium in Aqueous

78-1-25/43

of Pm on the pH of the solution was investigated as function of this pH. Optically polished quartz disks of 32 mm diameter and 1 mm thick= ness served for this purpose. The disks were previously kept in water for a long time and subsequently dried with alcohol. 4 of such small glasses were rotated throughout 1 to 4 hours in 300 ml active solution at a velocity of 60 revolutions per minute. After an alcohol bath and subsequent drying, the activity was measured on both sides by means of a counter. The concentration of the solution remained unchanged before and after the test, changes of pH were insignificant. Tests with elec= tro-phoresis had only a qualitative character, the method of the moving limit (reference 4) was applied. Particles of 30 to 40 m & can be se= parated within 1 hour by centrifuging at 2500 to 2700 revolutions per minute. Separations of particles up to 1 m μ of size are achieved by ultrafiltration by means of cellophane. The combination of the two lat= ter methods consequently makes it possible to carry out at least a rough quantitative determination of particles of various degrees of dispersion in solutions of the radio-elements. The results of adsorption of Pm on quartz glass are given in figure 1 (throughout h nours). With increasing pH of the solution, the adsorption increases up to pH = 6,2 in order to decrease at a further increase of pH. The dependence

Card 2/4

Solutions.

CIA-RDP86-00513R001652920001-5 "APPROVED FOR RELEASE: 08/25/2000

The State of Micro Quantities of Promethium in Aqueous Solutions

78-1-25/43

with the formation of a proper solid phase of the hydrolysed forms of

promethium.

There are 3 figures, and 6 references, 2 of which are Slavic.

SUBMITTED:

June 18, 1957.

AVAILABLE:

Library of Congress.

Card 4/4

STARIK, I. Ye. 78-1-26/43 Sheydina, L. D. A New Method for the Radiochemical Purification of Protacti-Starik, I. Ye., AUTHORS: num (Novyy metod radiokhimicheskoy ochistki protakt_iniya) Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 1, pp.139-144 TITLE: PERIODICAL: (ussa) The object of this elaborate investigation was to discover a simple method without using hydrofluoric acid - for the radiochemical purification. Thereby Pa²) was used, and zirconi-ABSTRACT:

Phthalic precipitates approximately an amount of 60 to 70 % Pa in a hydrochloric acid medium. Polonium coprecipitates to a large proportion. Therefore phthalic acid cannot be used for Phenylarsonic acid precipitates 90 to 95 % of Pa from a hydrochloride solution. Polonium coprecipitates quantitatively and can be separated only with difficulty. For this reason phenylarsonic acid cannot be taken into consideration either.

With mandelic acid Pa precipitates only partly in nitric solu-Card 1/2

78-1-26/43

A New Method for the Radiochemical Pruification of Protactinum

tion, whereas it precipitates twice with respect to quantity in hydrochloric acid solution. An optimum prescription was elaborated.

The separation of Po, Th, Ra, Ac, (the latter with La 140 as indicator) was investigated. Conclusions:

- 1.) Three new methods were investigated: Precipitation with phthalic acid, with phenylarsonic acid and with mandelic acid.
- 2.) The two first methods are insufficient because polonium coprecipitates.
- 3.) The precipitation with mandelic acid allows a rapid and accurate determination with an accuracy of from 5 to 10 %.
- 4.) The precipitation with mandelic acid makes it possible to achieve simultaneously a high degree of purity of the protactinum from all natural radioelements.
- 5.) The given method simplifies essentially the purification of protactinum. There are 9 tables, and 7 references, 2 of which are Slavic.

SUBMITTED:

June 18, 1957

AVAILABLE:

Library of Congress

Card 2/2

Starik, I. Ye., Starik, F. Ye., AUTHORS:

SOV/7-58-5-7/15

Mikhaylov, B. A.

TITLE:

On the Problem of the Shift of Isotopic Ratios in Natural Formations (K voprosu o smeshchenii izotopnykh sootnosheniy v

prirodnykh obrazovaniyakh)

PERIODICAL:

Geokhimiya, 1958, Nr 5, pp. 462 - 464 (USSR)

ABSTRACT:

The method suggested by V.V.Cherdyntsev (Refs 8,9) makes use of the measurement of the alpha and beta activity for the determination of the U II - U I ratio. The small $\beta\text{-activity}$ can, however, be measured only with a low accuracy: therefore the authors of this article modified this method. As U II has a considerably shorter half life than U I the U II amount may be neglected and the total amount of uranium may be taken as measuring standard for U I. The sum of U I and U II is determined by the alpha activity. Polonium was electrolytically separated in the radiochemical purification, the thorium isotopes were separated by the precipitation with cerium fluoride and radium isotopes by the precipitation with barium sulfate. Aluminium and iron were separated by means of ammonium carbonate.

Uranium was determined by weighing. Uranium was separated

Card 1/3

On the Problem of the Shift of Isotopic Ratios in Natural Formations

sov/7-58-5-7/15

from a 0,4 m ammonium oxalate solution onto a target and the alpha activity was determined by means of an apparatus of the type AA. By means of this method some minerals of different age were investigated (Table 1): uraninite, pitchblende, uranium pitch ore, and schroekingerite (Shrekengerit). Only the last mentioned, which is a quaternary formation, showed a deviation of the isotopic ratio of uranium. Furthermore the effect of the leaching out with HNO₃ and Na₂CO₃ on the isotopic ratio

was investigated (Table 2). An effect was demonstrated only in the leaching out of uraninite by means of Na₂CO₂. At present the authors of this article investigate the kinetics of the sublimation of uranium from pitchblende. The isotopic ratio of sublimated uranium (800°) was determined. There are 2 tables and 11 references, 8 of which are Soviet.

ASSOCIATION:

Radiyevyy institut im.V.G.Khlopina AN SSSR, Leningrad (Leningrad Radium Institute imeni V.G.Khlopin, AS USSR)

Card 2/3

On the Problem of the Shift of Isotopic Ratios

sov/7-58-5-7/15

in Natural Formations

SUBMITTED: July 22, 1957

Card 3/3

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652920001-5"

SCV/10-58-8-26/43 Starik, I. Ye., Corresponding Member, Academy of Sciences, USSR AUTHOR: Aivances in the Determination of the Absolute Age of Geological Formations (Novyye raboty po opreisleniyu absolyutnogo vozrasta geologicheskikh formatsiy). Transactions of the TITLE: 7th Annual Conference (VII yezhegoinaya sessiya) Vestnik Akademii nauk SUSR, 1958, Nr 9, pp. 120-121 (USSA) This conference was held in Moscow from May 8-12. It was at-PERIODICAL: tended, among others, by representatives from the Peoples! Republics. 40 reports were heard and discussed. A.A. Polkanov ABSTRACT: emphasized that measurements of radioactivity are suited in particular for age determinations of Pre-Cambrian formations, for which paleontological methods are not applicable. L.V. Komlev, N.P. Semenenko, reported on the Cambrian stage in Ukrainia. Problems of re-examing and precising the old scale of geological times is at present of topical interest. A special commission under D.I. Shcherbakov, Member, Academy of Sciences, USSR, was set up to deal with this problem. N.I. Iordanov, Bulgaria (Bolgariya), gave an example of age Card 1/2

Advances in the Determination of the Absolute Age of Geological Formations. Transactions of the $7^{\rm th}$ Annual Conference

determination. Professor L.N. Ovchinnikov reported on attempts of determing the age of metallogenetic epochs. Investigations concerning the determination of the velocity of sedimentation were discussed. These studies were conducted in the laboratory of I.Ye.Starik, in the Radiyevyy i titut (Radium Institute), and in the laboratory of V.I. Baranev, in the Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo (Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy). N.I. Polevaya, G.A. Kazakov, were successful in the age determination of glauconites. They based their work upon suggestions by M.M. Rubinshteyn, which were made previously by him in the Vsesoyuznyy geologicheskiy institut Ministerstva geologii i okhrany nedr SSSR (All Union Geological Institute of the Ministry of Geology and the Protection of Mineral Resources of the USSR). Kh.I. Amirkhanov, S.B. Brandt achieved the same results in the Dagestanskiy filial Akademii nauk SSSR (Dagestan Branch AS USSR). L.Ya. Krylov, Yu. I. Silin reported on paleographical structures. Finally the activity of the laboratories in Sverdlovsk, Ufa, Makhach-Kala, Tbilisi, Alma-Ata and Yerevan was acknowledged.

Card 2/2

STARIK, I.Ye.; STARIK, A.S.; YASHUGINA, Ye.A.; SMIRNOVA, Ye.A.

Quantitative separation of actinium from radioactinium and actinium X. Trudy Radiev.inst.AN SSSR. 8:170-176 '56. (MIRA 12:2)

(Actinium—Analysis)

STARIK, I.Ye.; NIKOLAYEV, D.S.; STARIK, F.Ye.; MELIKUVA, O.S.

Uranium content in natural waters of the U.S.S.R. Report Ne.1.

Trudy Radiev.inst.AN SSSR. 8:250-261 '58. (MIRA 12:2)

! (Uranium) (Water-Analysis)

STARIK, I.Ye.; STARIK, F.Ye.; AFOLLONOVA, A.N.

Carbonate method for separating microquantities of uranium form iron. Trudy kom.anal.khim. 9:264-273 '58. (MIRA 11:11) (Uranium)

(Uranium)

STALIK, I.Ye.; SOBOTOVICH, E.V.; LOVTSYUS, G.P.; NESTEROV, V.P.

Radioactive control of pyrochemical means of quantitative extraction of lead from natural formations. Trudy kom.anal.khim. 9:341-348 '58. (MIRA 11:11)

(Lead-Metallurgy)

(Radioactive tracers)

sov/62-58-10-22/25 Starik, I. Ye., Skul'skiy, I. A. Adsorption of Microquantities of Radioactive Elements on Non-Ion Exchange Adsorbents (Adsorbtsiya mikrokolichest▼ AUTHORS: radioelementov na neionoobmennykh adsorbentakh) TITLE: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 10, pp 1278 - 1279 (USSR) PERIODICAL: The rules governing the non-ion exchange adsorption of radioactive elements have remained almost undiscovered. The investigation of these rules is of interest because they play a part not less important than that of ion exchange ABSTRACT: adsorption of Zr⁹, Nb⁹5, Th²³⁴, Pa²³³, Tl²⁰⁴(I) and Cs⁸ on fluoroplast-4 and paraffin. The surfaces of these adsorbents are hydrophobic and do not have ion exchange properties. The radioactive elements among the conditions investigated were in ionic or molecular disperse state. The adsorption was discovered as a function of the concentration versus HNO3, as well as of the NH4NO3 and KNO3 salts. It turned out that in the interval from 0,1 to Card 1/3

Adsorption of Microquantities of Radioactive Elements SOV/62-58-10-22/25 on Non-Ion Exchange Adsorbents

3-5 N HNO₃, Zr⁹⁵, Nb⁹⁵, Th²³⁴ and Pa²³³ were adsorbed on fluoroplast-4 and paraffin (quantitatively 2-6% from 1 ml solution per 1 m² adsorbent); it was possible to increase the adsorption of thes radioactive elements several times by the addition of NH₄NO₃ and KNO₃. The adsorption intensity apparently depends on the formation of neutral complexes of the type [Me(OH)(NO₃)_y]. Similar dependences on the nitric acid concentration were also found by other scientists. Based on the data obtained the authors of this paper are of opinion that the "specific adsorption" must be regarded as a molecular one. The absence of the adsorption of Cs¹³⁷ and Tl²⁰⁴ (I) on fluoroplast-4 and paraffin has to be explained by the highly basic elements (which under the conditions investigated do not form any non-charged compounds.

Card 2/3

Radium Inst. in Y.G. Khlopin AS USSR

STARIK, I.Ye.; PETRZHAK, K.A.; SHATS, M.M.; SEMENYUSHKIN, I.N.; RAK, M.A.

Isotopic composition and abundance of uranium in meteorites.

Meteoritika no.16:126-130 '58.

(Meteorites) (Uranium)

(MIRA 11:8)

3(1) AUTHORS:

Starik, I. Ye., Corresponding Member, SOV/20-123-3-11/54

Academy of Sciences, USSR, Shats, M. M., Sobotovich, E. V.

TITLE:

On the Age of Meteorites (O vozraste meteoritov)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 3, pp 424-426

(USSR)

ABSTRACT:

The data on the content of uranium, lead and on the isotopic composition of lead in the meteorites permit a successful investigation of some cosmogonic problems, especially the determination of the age of the meteoric bodies and of the Earth.

From the data on the amount of

 Pb^{207} and Pb^{206} in meteorites, C. Patterson found the value of 4.5.109 years for their age. This value is now considered to be the most reliable one. The determination of meteorite age from the data on other lead-uranium isotopes is also of considerable interest. The results of some special investigations of the

amount of uranium in meteorites are given in a table.

The concentration of uranium in stony meteorites and in pallasite

Card 1/4

olivine amounts to 2.10^{-7} g/g, but in iron meteorites it is

On the Age of Meteorites

SOV/20-123-3-11/54

 ${\rm Pb}^{207}/{\rm Pb}^{206}$. For the chondrites Forest City (Forest Siti) and Modok anomalous high values (> 20.109 years) were found. which are probably due to too low values of the uranium content in these chondrites. The authors determined the contents of these elements and carried out a mass-isotopic analysis of the lead taken from the same meteorites. The lower values of the age, which were due to the ratios Pb297/U235 and especially Pb^{206}/U^{238} , are within the error limits of the determination of U and Pb(\pm 30%). The above discussions lead to the following conclusion: for the investigated meteorites, the isotopic composition of lead does not display any noticeable anomalies and also the content of uranium and lead in them is approximately constant. The age of the meteorites deduced from these experimental data agrees with the modern hypotheses about their age. The authors thank the Komitet po meteoritam (Committee for meteorites) which put the samples at their disposal, and

Card 3/4

STARIK, Iosif Yevseyevich, Prinimala uchastiye: ISHINA, V.A., ARON, G.M., red.1zd-va; ZAMARATEVA, R.A., tekhn.red.

[Fundamentals of radiochemistry] Osnovy radiokhimii. Moskva. Izd-vo Akad.nauk SSSR, 1959. 459 p. (MIRA 12:11)

1. Chlen-korrespondent AN SSSR (for Starik). (Radiochemistry)

TARIK, 1 /2. 21 (0), 5 (0)

AUTHOR:

Shchebetkovskiy, V. N.

SOV/89-7-2-17/24

TITLE:

All-Union Symposium on Radiochemistry (Vsescyuznyy simpozium po radiokhimii)

PERIODICAL:

Atomnaya energiya, 1959, Vol 7, Nr 2, pp 175-176 (USSR)

ABSTRACT:

A symposium was held in Leningrad from 3 to 5 March 1959. More than 200 participants from different institutes in Moscow, Leningrad, Kiyev, Novosibirsk, Tbilisi and Gor'kiy attended it. Twentyeight papers were read. The following are mentioned: I. Ye. Starik: On the problem of the molecular state of micromasses of radioactive elements in solutions; I. Ye. Starik, N. I. Ampelogova, F. L. Ginzburg, L. I. Il'menkova, I. A. Skul'skiy, L. D. Sheydin: Condition of radioactive elements occurring in microconcentrations of solutions (Zr, Am, Pa, Po). M. N. Yakovleva, M. A. Shurshalina: Application of the dialysis method for examination of uranium carriers in natural bodies of water; V. I. Paramonova, Ye. F. Latyshev: Complex formation of the multivalent ruthenium with chlorine ions. K. B. Zaborenko, A. V. Zaval'skaya, V. V. Fomin: Determination of the composition and the instability constants by ion exchange of the cerium oxalate complexes. A. I. Moskvin: Complex formation of plutonium and americium with the anions of

Card W

State of tracers of radioactive elements in solutions. Part 5:
State of zirconium in nitrate solutions. Radiokhimiia 1 no.1:
66-76 '59.

(Zirconium-Isotopes) (Nitrates)

STARIK, I.Ye.; SKUL'SKIY, I.A.

State of tracers of radioactive elements in solutions. Part 6:
State of niobium in aqueous solutions. Radiokhimia 1 no.1:77-81
(MIRA 12:4)

'59.

(Niobium--Isotopes) (Solution (Chemistry))

STARIK, I.Ye.; SHEYDINA, L.D.; IL'MENKOVA, L.I.

State of microquantities of radioelements in dilute solutions
Part 7: Investigation of the state of protactinium in aqueous

rart 7: investigation or the state of protectinum in aqueous solutions by means of adsorption and desorption. Radiokhimiia 1 no.2:168-170 *59.

(Protactinium) (Sorption)

State of microquantities of radioelements in dilute solutions.

Part 8: Adsorption of lanthamm on quartz glass and pleziglas.

Radiokhimiia 1 no.2:171-173 '59. (MIRA 12:8)

(Lanthamus) (Adsorption)

STARIK, I.Ye.; MELIKOVA, O.S.

Factors affecting the emanating power of synthetic salts and minerals. Effect of the particle size on the emanating power of synthetic salts and minerals from radon, thoron and actinon. Radiokhimiia 1 no.2:196-203 *59. (MIRA 12:8)

(Radioactive substances)

STARIK, I.Ye.; SHEYDINA, L.D.

Mathod for separating Pa²³. Radiokhimila 1 no.3:270-272
(MIRA 12:10)

(Protactinium-Isotopes)

STARIK, I.Ye.; KOLYADIN, L.B.; NIKOLAYEV, D.S.

Conditions under which micro quantities of uranium exist in solution. Radiokhimiia 1 no.3:317-320 '59. (MIRA 12:10) (Uranium)

STARIK I.Y. KUZNETSOV, Yu.V.; LEGIN, V.K.

Forms in which uranium and thorium are found in bottom deposits of the Antarctic Ocean. Radiokhimiia 1 no.3:321-324 59.

(Uranium) (Thorium) (Antarctic Ocean-Deep sea deposits)

STARIK, I.Ye.; AMPELOGOVA, N.I.; GINZBURG, F.L.; LAMBET, M.S.; SKULISKIY, I.A.; SHCHEBETKOVSKIY, V.N.

Molecular state of ultraminute quantities of radicelements in solutions. Radiokhimiia 1 no.4:370-378 '59. (MIRA 13:1) (Radioactive substances)

STARIK, I.Ye.; SKUL'SKIY, I.A.

State of microquantities of radioelements in solutions. Part 9:
State of microquantities of zirconium in the range of hydrolysis.
Radiokhimiia 1 no.4:379-383 '59. (MIRA 13:1)
(Zirconium)

STARIK, I.Ye.; SHEYDINA, L.D.; Il'MENKOVA, L.I. State of microquantities of radioelements in solutions. Part 10: Study of the state of protactinium in aqueous solutions. Radiokhimiia 1 no.4:391-394 '59. (MIRA 13:1)

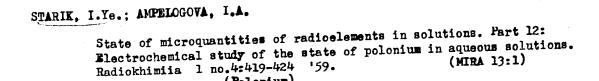
(Protactinium)

CIA-RDP86-00513R001652920001-5" APPROVED FOR RELEASE: 08/25/2000

State of microquantities of radioelements in solutions. Part 11:

State of microquantities of radioelements in solutions. Radiokhimiia Electrophoretic mobility of polonium in aqueous solutions. Radiokhimiia 1 no.4:414-418

(Polonium) (Electrophoresis)



(Polonium)

CIA-RDP86-00513R001652920001-5" APPROVED FOR RELEASE: 08/25/2000

State of microquantities of radioelements in solutions. Part 14:
Study of the state of americium in aqueous solutions, Radiokhimia 1 no.4:435-438 '59.

(Americium)

(Americium)

STARIK, I.Ye.; RATNER, A.P. [deceased]; PASVIK, M.A. [deceased]; GINZBURG, F.L.

Use of phenylarsonic acid for the separation of neptunium and plutonium. Radiokhimita l no.5:545-547 '59. (MIRA 13:2) (Benzenearsonic acid) (Neptunium) (Flutonium)

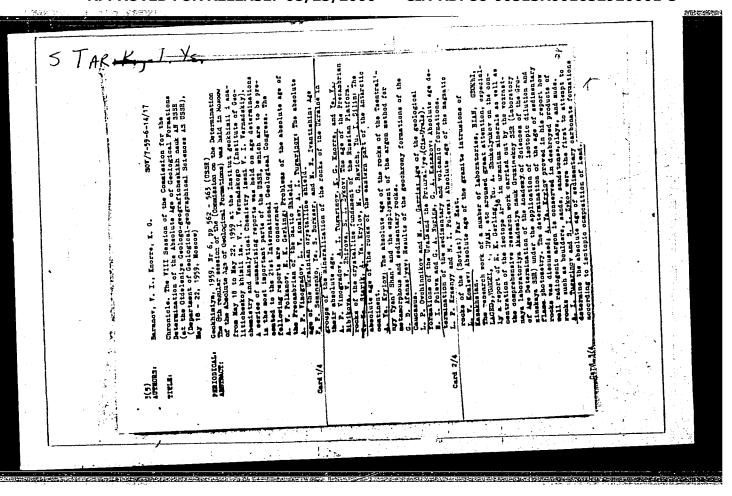
STARIK, I.Ye.; SOBOTOVICH, E.V.; LOVTSYUS, G.P.; LOVTSYUS, A.V.; SHATS, M.M.

Determination of the lead content and of its isotope composition in iron meteorites. Radiokhimia 1 no.5:596-602 '59.

(Lead--Analysis) (Meteorites)

STARIK, I.Ye. Ultraminute concentrations of radioelements in solutions. Khim. nauka i prom. 4 no.4:448-456 59. (MIRA 13:8) (MIRA 13:8) 1. Chlen-korrespondent Akademii nauk SSSR. (Radioactive substances)

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652920001-5



"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652920001-5

sov/62-59-6-1/36 5.(2) Starik, I. Ye. The Form in Which Radioelements Occur in Crystalline Substances (Forma nakhozhdeniya radioelementov v kristallicheskikh AUTHOR: TITLE: veshchestvakh) Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 6, pp 955-962 (USSR) PERIODICAL: The present paper is a synopsis of the investigations which the author carried out together with his coworkers in the field mentioned in the title since 1929. The method suggested here, ABSTRACT: that is a comparative leaching out and examination of the emanation, proved to be most suitable for determining in what form radioelements in microquantities occur in crystalline substances. By means of the experimental results obtained by the above mentioned method the assumptions on a different arrangement of the initial substances and their decomposition products in the crystal lattice, which were already previously made (Tables 1-9), could completely be verified. The possible separation of the isotopes, the initial substances, and their decomposition products (Th and RdTh, UI and UII, Pb and RaD) may be explained by their different position in the crystal Card 1/2

The Form in Which Radioelements Cocur in

SOV/62-59-6-1/36

Crystalline Substances

lattice. The lesser possibility, as compared with ThX, of leaching out Affn mainly results from a greater adsorbing capacity of RdTh compared with ThX. The well known content of radicelements in mineral waters is in good agreement with the assumption on the migration mechanism of the radioelements. The conditions for this migration of the radioelements from minerals also hold for the form of the radioelements in artificially produced salts. There are 3 figures, 9 tables, and 1 Soviet reference.

ASSOCIATION:

Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences, USSR)

SUBMITTED:

October 1, 1957

Card 2/2

CIA-RDP86-00513R001652920001-5" APPROVED FOR RELEASE: 08/25/2000

SOV/11-59-9-9/18

3(5)

Starik, I.Ye., Sobotovich, E.V. and Shats, M.M.

AUTHORS:

On the Problem of the Age of Tektites

TITLE:

Izvestiya Akademii nauk SSSR, Seriya geologi-

cheskaya, 1959, Nr 9, pp 90-91 (USSR)

ABSTRACT:

PERIODICAL:

The origin of tektites has not yet been determined. Some geologists suppose that the tektites are of cosmic origin. Their absolute age, determined by the K-Ar method by E.K. Gerling and M.L. Yashchenko, is between 1.7x107 and 7.3x106 years, that is considerably less than the absolute age of stone meteorites. The authors determined age of stone meteorites. The authors determined the age of a tektite by the lead method. Prethe age of a tektite is of cosmic origin, the suming that the tektite is of cosmic origin, the authors fixed its age between 4.7x109 and 3.7x109 authors fixed its age between 4.7x109 and 3.7x109 years. On the other hand, presuming that it is of terrestrial origin and is a product of remelting of some sedimentary rocks, and taking the isotope composition of Tertiary or Quaternary

Card 1/2

SOV/11-59-9-9/18

On the Froblem of the Age of Tektites

lead, the authors fixed the age of the textite at 3 billion years, instead of a few million as was to be expected. Thus, say the authors, the substance from which tektites originated must be substance from which tektites originated must be of cosmic origin, although further research is necessary. There is 1 Soviet and 1 English re-

farence.

Radiyevyy institut imeni V.G. Khlopina (The Radiyevyy institute imeni V.G. Khlopin), Leningrad dium Institute imeni V.G. Khlopin), ASSOCIATION:

9 September 1958 SUBILITIED:

Card 2/2

sov/75-14-3-9/29 Starik, I. Ye., Starik, F. Ye., 5(2) Lazarev, K. F. AUTHORS: Photometric Determination of Micro-Quantities of Thorium (Fotometricheskoye opredeleniye mikrokolichestv TITLE: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 3, PERIODICAL: pp 306-312 (USSR) The optical conditions for the photometric determination of thorium were devised on the basis of standard curves by means of the colorimetric photometer FEK-M using thoron as reagent. As can be seen from the figure the influence ABSTRACT: exercised by Ce and La upon the light absorption is suppressed at pH 0.96 - 0.85. Small calcium amounts do not disturb. The separation of thorium from sodium, potassium, calcium, and barium is carried out by precipitation of thorium together with Fe(OH) 3. The quantitative precipitation was checked with UX, and RdTh. The separation of thorium from iron and uranium was carried out in weakly acid solution by precipitation with calcium oxalate. The mean absolute error was + 0.3 x at 1 - 10 Th Card 1/2

Photometric Determination of Micro-Quantities of

SOV/75-14-3-9/29

Thorium

The maximum error does not exceed \pm 0.5%. There are 1 figure, 4 tables, and 23 references, 5 of which are Soviet.

ASSOCIATION:

Radiyevyy institut AN SSSR, Leningrad imeni V. G. Khlopina

(Institute of Radium imeni V. G. Khlopin, Academy of Sciences,

USSR, Leningrad)

SUBMITTED:

February 3, 1958

Card 2/2

STARIK, I.Ye., KURBATOV, V.V., LITVINA, L.A.

Effect of heat on the texture of micas and microcline and the preservation of argon in them. Zap. Vses. min. ob-va 88 no.6:724-728 159. (MIRA 13:8)

1. Radiyevyy institut im. V.G. Khlopina AN SSSR, Leningrad.
(Microcline) (Mica) (Argon)

3 (5) AUTHORS:

. :

SOV/20-126-1-39/62 Starik, I. Ye., Corresponding Member

AS USSR, Ravich, M. G., Krylov, A. Ya.,

Silin, Yu. I.

TITLE:

On the Absolute Age of the Rocks of the East-Antarctic Platform (Ob absolyutnom vozraste porod Vostochno-Antarkticheskoy plat-

formy)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 1, pp 144 - 146

(USSR)

ABSTRACT:

In the present paper the first determination results of the rocks mentioned in the title, mainly of Precambrian age, are discussed. For this purpose the collection of the Sovetskaya antarkticheskaya ekspeditsiya (Soviet Antarctic Expedition) 1956-58 was used. It was collected during the prospecting of a coastal strip of almost 5000 km length (Refs 1,2). The investigated region has the structure of a 3-stage plateau which is in many a respect analogous to the other Godvanskiye platforms All three stages are characterized in short. No Mesczoic sediments have hitherto been found in the region of the mentioned plateau.. Cenozoic sediments are only represented by covers of basic effusives among which leucite basalts predominate. The

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